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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/912,448	07/26/2001	Charles L. Wilson	0145.00	4447

25295 - 7590 06/16/2004

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EXAMINER

WEINSTEIN, STEVEN L

ART UNIT	PAPER NUMBER
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1761

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)	
09/912,448	WILSON ET AL.	
Examiner	Art Unit	
Steven L. Weinstein	1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/1/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21 and 3-20 are rejected under 35 U.S.C. 112, first paragraph, for containing New Matter, and being based on a non-enabling specification.

Almost the entire phrasing of new claim 21 appears to be New Matter. That is, reciting that both the chitosan salt and the essential oil are present in amounts which are not "inhibitory" in the absence of the other appears to be New Matter, not supported by the specification. Also, the ranges .0016- .1% for the chitosan salt and .025- .1% essential oil appear to be New Matter, not supported by the specification. Applicants' response filed December 1, 2003 makes brief reference to the specification for support for these recitations, but it is not clear to the examiner that these references support the recitations. To overcome the rejection, it would appear that a more detailed analysis of the specification is necessary since, on its face, there is no specific reference in the specification for neither component being in a concentration that is "not inhibitory" by itself but synergistic together, nor are the ranges clearly disclosed. Note, too, the phrase "not inhibitory" is not seen to be clearly defined. Does this mean that in the concentration of the component would have no antibacterial or antifungal ability at all? Clarification and/or correction is required. Finally, it is noted that claim 21 recites "preferably" in regard to the two ranges. "Preferably", like the phrase "such as" can be treated as an alternative recitation. That is, A preferably B can be construed as just A.

Art Unit: 1761

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21 and 3-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (6,352,727) in view of Ozawa (JP 10-195,766), Atsumi et al (JP 2000-217509) and Packpia (1996, vol. 40, n.1, pages 132-138).

In regard to claim 21, Takahashi discloses a composition which has protectant and/or eradicant activity and which substantially inhibits bacterial and fungal growth comprising a chitosan salt and an essential oil in a synergistically effective amount. Thus, contrary to what has been urged, the art recognized that the combination of chitosan or its salts and an essential oil have a synergistic effect in regard to antibacterial/antifungal properties. Claim 21 further recites that each component, i.e., the chitosan salt and the essential oil, is present in an amount, which is "not inhibitory in the absence of the other. This phrase does not appear to be clearly defined as noted above. In any case, it is not clear whether the concentrations of the chitosan salt (or chitosan) and the essential oil in Takahashi inherently meet this concentration or not. If they do, the rejection would be one of anticipation under 35 USC 102. However, since it is not clear, the rejection is made under obviousness, 35 USC 103. Since Takahashi discloses that the combination of either chitosan or chitosan salts and essential oils provide synergistic antibacterial and anti-fungal properties, the selection of the particular concentrations of the components to provide a synergistic result would have been an

Art Unit: 1761

obvious routine determination, fairly lead by the teachings of the art. Ozawa et al can be relied on as further evidence that it was well established in the art to combine chitosan salts and an essential oil (e.g. hinokitiol) for their antibacterial function. Atsumi et al is also relied on as further evidence of chitosan/essential oil anti-bacterial combinations and Packpia (1996) is relied on as further evidence of the conventionality of employing hinokitiol, chitosan, and spice extracts as anti-bacterials. The dependent claims are rejected essentially for the reasons given in the Office actions mailed December 4, 2002 and August 26, 2003. For example, in regard to claims 3 and 6, which recite a number of "optional" ingredients (which could, it is noted, be construed as not even present); Takahashi teaches it is known to add various additives to an anti-bacterial composition for its particular functionality such as the recited antioxidants and stabilizers and surfactants. Takahashi also teaches the many varieties of vehicles used in the art to introduce antibacterial compositions such as wipes (claim 7), spray dispensers (claim 8) and packaging materials (claim 9). In regard to claim 4, which recites a number of essential oils, the art taken as a whole teaches that essential oils in general have anti-bacterial properties. Takahashi employs essential oils from one type of plant. As evidenced by Atsumi et al and Ozawa et al, the essential oil, hinokitiol, is also known to be anti-bacterial and to modify Takashi and substitute one conventional anti-bacterial essential oil for another conventional anti-bacterial essential oil for its art reorganized and applicants intended function would have been obvious. In regard to claim 5, both Takahashi and Atsumi et al teach additional anti-bacterial agents. In regard to claim 10, both Takahashi (who teaches chitosan or its salts) and Atsumi et al

Art Unit: 1761

teach the conventionality of treating food surfaces with the anti-bacterial composition of chitosan (or its salt) and an essential oil. In regard to claims 11 and 12, which specifically recite fruits or vegetables, since Takahashi discloses contacting foods with the chitosan salt/essential oil composition for its anti-bacterial/anti-fungal properties and since Atsumi et al specifically teaches treating vegetables with anti-bacterial compositions including chitosan and essential oils, to modify Takahashi and use the anti-bacterial/anti-fungal composition to treat vegetables including cut vegetables for its art recognized and applicants intended function would therefore have been obvious. The product claims 19 and 20 are also rejected for the reasons given above.

Applicants response filed December 1, 2003 has been fully and carefully considered but is seen, for the most part, to be moot in view of the new rejection. The urgings that are relevant to the new rejection concern Takahashi found on page 13 of the response. It is urged that Takahashi prefers the chitosan to chitosan salts. Whether Takahashi prefers one form of chitosan over the other is irrelevant. The fact is that Takahashi teaches that the combination of essential oils with chitosan or chitosan salts yield a synergistic result in regard to anti-bacterial and anti-fungal effectiveness. The statement in column 5, paragraph 5 is irrefutable: "chitosan derivatives... such as chitosan lactate, chitosan chloride or the like can be used." It is immaterial whether Takahashi claims the salts or not. A reference is good for whatever it teaches and not just what is claimed. Finally in this regard, it is not clear whether the response urges that applicants specific salts are different from those of Takahashi's salts and by further inference that applicants salts work better than chitosan. If this is what applicants are

Art Unit: 1761

urging, then those differences do not appear to be disclosed nor claimed nor found anywhere in the record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven L. Weinstein whose telephone number is (571) 272-1410. The examiner can normally be reached on Monday-Friday from 7:00 a.m. to 3:30 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1410. The fax phone number for the organization where this application is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S.L. Weinstein/dh
June 1, 2004

Corrected

June 2, 2004


STEVE WEINSTEIN
PRIMARY EXAMINER 1761
6/15/04